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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/721,587	Applicant(s) ACKERMAN ET AL.	
	Examiner Greta L. Robinson	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26, 38-49 and 55-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26, 38-49 and 55-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-26, 38-49 and 55-64 are pending in the present application.

Election/Restrictions

2. Applicant's election without traverse of Group I (claims 1-26, 38-49 and 55-64) in the reply filed on October 26, 2006 is acknowledged.

3. Claims 27-37 and 50-54 have been cancelled. Claims 1, 10, 11, 17, 21, 22, 24, 26, 38, 42, 43, 55, 57 and 58 have been amended.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-26, 38-49 and 55-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathews et al. US Patent Application Publication No. 2003/0163479 A1 in view of Huttel et al. US Patent Application Publication No. 2003/0140027 A1.

Regarding claim 1, **Mathews et al.** teaches a computer, comprising: a memory [note: paragraphs 0058 and 0059 the invention can support multiple types of data storage technologies]; and

a data structure for a generic document, the data structure stored in the memory and including:

a definition of a first element, the definition of the first element including an element value field [note: paragraphs 0060 and 0053 relational database server acting as a data store];

a key identifier to identify a key value field to be used as a key in a data store [note: paragraph 0067 identifier; paragraph 0068 defined relationships; paragraph 0075; and Figure 8]. Although Mathews et al. teaches the invention substantially as cited above they do not explicitly disclose a key value field. **Huttel et al.** teaches a key value field that is assigned to a particular record [note: ValueKey field paragraph 0168; Figure 3A]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Huttel et al. with Mathews because such a structure would enhance retrieval and storage of data.

Regarding claim 2, wherein: the definition of the first element includes the key identifier as property of the first element; and the key identifier identifies the element value field as the key value field [see: Mathews Figures 5-7 note Model Element].

Regarding claim 3, the definition of the first element includes a definition of the first attribute of the first element, the definition of the first attribute including the key identifier; and the key identifier identifies the element value field as the key value field [note: Mathews provides for defining a data store schema paragraph 0053; paragraph 0055 model defined attributes; paragraph 0067 method 513 element defines attributes].

Regarding claims 4-6, "wherein the definition of the first element includes a definition of a second attribute ...the definition of the second attribute includes the key identifier as a property of the second attribute ... the definition of the first element further includes a definition of a third attribute ...a second element; and a tree structure ... [note: Mathews et al. paragraph 0068 means to define relationships; also see 0053, 0055, 0067].

Regarding claim 7, further comprising: a second element; and a tree structure including the first element and second element [note: Mathews et al. paragraph 0068].

Regarding claim 8, wherein the key identifier identifies the key value field as one of a primary key, a secondary key, and a foreign key for the data store [note: Huttel et al. paragraphs 0168-0170 and paragraph 0012 foreign key].

Regarding claim 9, wherein the key identifier identifies the key value field as a foreign key for the data store; and the key identifier references a second data store [note: Huttel et al. paragraphs 0011, 0012].

Regarding claim 10, wherein the datastructure contains eXtensible markup Language (XML) schema [note: Huttel et al. paragraphs 0019-0021].

Regarding claim 11, a computer system, comprising: a data store to store a first generic document; and

a first schema applicable to the first generic document, the first document, the first schema including:

a definition of a first element, the definition of the first element including an element value field; a first key identifier to identify a first key value field in the first generic document to be used as a key in a data store [note: Mathews et al. paragraph 0053 data store schema defines data structure].

Regarding claims 12-18, the definition of the first element includes the first key identifier as a property of the first element ... the definition of the element includes a definition of a first attribute ... wherein the definition of the first element includes a definition of a second attribute ... the definition of the second attribute includes the first key identifier as a property of the second attribute ... the definition of the first element further includes a definition of a third attribute ... the data store operative to store a second generic document the first schema includes a first identifier for the first key value field [note: Mathews et al. paragraph 0053; paragraph 0055 model defined attributes; paragraph 0067 method 513 element defines attributes].

Regarding claims 19-26, wherein the data store is a Lightweight Directory Access protocol (LDAP) data store comprising a parser to parse the schema the parser

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is operative to identify the first key value field in the schema Wherein the data store further includes an index associates with the first generic document Wherein the index is in the native format of the data store the schema includes a definition of at least one of a second element and a fourth attribute The parser is operative to identify the second element The parser is operative to parse the schema into objects The first generic document is an eXtensible markup Language (XML) document [note: Mathews et al. paragraph 0005 and Huttel et al. Figure 2A].

Regarding claims 43-49, defining a schema in a computer, comprising defining a first element in the schema, the first element including an element value field ... [note: Mathews et al. paragraphs 0051, 0053 and 0064 additional object types may be specified].

Regarding claims 38-42, Mathews et al. teaches defining a data store in a computer, comprising accessing a schema; locating an object defined in the schema as a key; defining a first data structure in the data store for the object; identifying the first data structure in the data store as a key data structure ... [note: Mathews et al. paragraphs 0051 and 0053; Huttel et al's ValueKey Field is a key data structure paragraph 0168]. Mathews et al. does not explicitly teach a key data structure; however Huttel et al's ValueKey Field is a key data structure. It would have been obvious to one of ordinary skill at the time of the invention to have combined Huttel et al. with Mathews because such a structure would enhance retrieval and storage of data.

The limitations of claims 55-64 have been addressed in claims 1-26 and 38-49; therefore they are rejected under the same rationale.

Response to Arguments

6. Applicant's arguments filed January 22, 2007 have been fully considered but they are not persuasive.

In the response Applicant argued the examiner only cited Mathews in rejecting claims 11 and 43 and did not cite Huttel et al. in rejecting claims 11 and 43. Both Mathews et al. and Huttel are cited under 103(a) in rejecting claims 1-64. Huttel et al. is applied as a secondary reference teaching the feature of a "key value field" and/or key data structure. Huttel et al. teaches a ValueKey field (i.e. key value field) that is assigned to a particular record [note: ValueKey field paragraph 0168; Figure 3A].

Applicant states Mathews et al. does not suggest a schema for a generic document; but simply uses schema to define the APIs that permit a consumer to access data from the data store. Applicant makes reference to the disclosure at page 4 lines 20-21, which states a schema defines a class of documents and makes reference to XML schema applicable to the XML documents; however Applicant has not used these terms in the claim language of claims 43 and 58. Applicant simply makes reference to a schema for a generic document within the preamble of the claim. Mathews et al. provides for defining a data store schema which is compatible with multiple types of data storage technologies see paragraphs 0153 and 0158; also note abstract dynamic integration ability and custom implementations paragraph 0005. Applicant states Mathews et al. and Huttel et al. do not teach the features of claims 1, 11, 43 and 58 with respect to loading a value from the generic document schema. In response to applicant's argument that the references fail to show certain features of applicant's

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invention, it is noted that the features upon which applicant relies (i.e., loading a value from the generic document schema) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dettinger et al. US Patent Application Publication No. 2005/0228800 A1


Angele et al. US Patent Application Publication No. 2006/0173868

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta L. Robinson whose telephone number is (571)272-4118. The examiner can normally be reached on M-F 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Greta Robinson
Primary Examiner

Greta Robinson
Primary Examiner
May 03, 2007